

REMARKS

I. Introduction

In response to the Office Action dated January 2, 2001, claims 8-16 have been cancelled, and 17-40 have been added. Claims 17-40 remain in the application. Reconsideration of the application, as amended, is requested.

II. Claim Amendments

Applicants' attorney has made amendments to the claims as indicated above. These amendments were made solely for the purpose of clarifying the language of the claims, and were not required for patentability or to distinguish the claims over the prior art. These amendments are supported by the application as originally filed, and introduce no new matter. Entry of these amendments is respectfully requested.

III. Examiner Interview Summary

Record is made of a telephone interview on June 7, 2001, between Applicants' undersigned attorney, and Examiners Loeb and Schwartzman in connection with the present patent application. Prior to the interview, Applicants' representative presented an informal draft of new claims 17-40 for preliminary discussion. The discussion centered on Applicants' intent to present a new set of claims that more clearly relate to the inventive concept underlying the claimed subject matter, and that remain within the subject matter of Group I, which was previously elected for examination following a restriction requirement. Applicants gratefully acknowledge and appreciate the helpfulness and suggestions provided by both Examiners Loeb and Schwartzman during this interview.

IV. Restriction Requirement

At page 2 of the Office Action, the Examiner noted that the restriction requirement previously set forth had been rendered moot by the cancellation of claims 3-5. The Examiner additionally noted that the claims of elected Group I had been cancelled and replaced with claims 8-

16, which were deemed drawn to the same invention. Applicants respectfully note that new claims 17-40 presented herein relate to the subject matter of Group I.

V. Sequence Compliance

At page 2 of the Office Action, the Examiner stated that the application fails to comply with the requirements of 37 CFR 1.821 through 1.825 because sequences were set forth that lack sequence identifiers and that no CRF and paper sequence was filed containing these sequences, and no attorney statement was filed.

In response, Applicants have amended the specification at pages 11 and 27 to introduce the sequence identifiers corresponding to SEQ ID NO: 1, SEQ ID NO: 84 and SEQ ID NO: 85. Applicants direct the Examiner's attention to the paper and computer readable form of the sequence listing, dated September 3, 1999, and filed together with the instant application on September 9, 1999. A copy of the paper form submitted on September 9, 1999, is submitted herewith, together with a copy of the postcard that acknowledges receipt of the paper and computer readable form and the statement that the content of the paper and computer readable forms of the sequence listing is the same.

In the event that the computer readable form of the sequence listing submitted on September 9, 1999, is not available, Applicants enclose herewith a letter requesting transfer of sequence information from application serial no. 08/487,799, filed on June 7, 1995.

VI. Objection to the Specification

At page 3 of the Office Action, the disclosure was objected to because of a redundancy in the statement regarding cross-reference to related applications. Applicants appreciate the Examiner's suggestion for correction, and have amended page 1 of the specification in accordance the Examiner's suggestion.

Also at page 3 of the Office Action, the Examiner noted that the Brief Description of the Drawings does not describe the multiple panels set forth in Figures 1, 6-8 and 30. Applicants appreciate the notification regarding this discrepancy, and have amended the specification to identify the multiple panels of these figures.

VII. Double Patenting Rejection

At page 4 of the Office Action, claims 8-16 were rejected under 35 USC §101 as claiming the same invention as that of claims 1-9 of prior U.S. Patent No. 6,010,908. The cancellation of claims 8-16 renders this rejection moot.

VIII. Rejections Under 35 USC §112

At pages 4-5 of the Office Action, claims 8-16 were rejected under 35 USC §112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. The cancellation of claims 8-16 renders this rejection moot.

IX. Conclusion

In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicants' undersigned attorney.

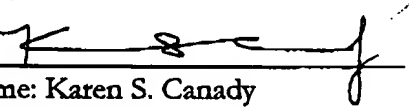
Respectfully submitted,

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APPENDIX: VERSION WITH MARKINGS
TO SHOW CHANGES MADE IN THE SPECIFICATION

Please delete the paragraph at page 1, lines 10-13, and replace it with the following paragraph:

This is a divisional application of [the continuation-in-part] application Serial No. 08/487,799, filed on June 7, 1995, [allowed] now U.S. Patent No. 6,010,908, which is a [continuation-in-part of the] continuation of application Serial[.] No. 08/408,544, filed on March 24, 1994, now abandoned which is a continuation of [the] application Serial No. 07/933,472 filed on August 21, 1992, now abandoned.

Please delete the paragraph at page 9, lines 21-22, and replace it with the following paragraph:

Figures 1A-C is a scheme illustrating a homologous recombination process naturally occurring in cells.

Please delete the paragraphs at page 9, line 34 to page 10, line 4, and replace it with the following paragraphs:

Figures 6A-6B are [is] an autoradiographic analysis of CFTR DNA from CF cells transfected with 491 nucleotide DNA fragments in the dendrimer-DNA complex.

Figures 7A-7B are [is] allele-specific PCR analysis using primers CF7B/CF6(N) or CF8B/CF6(ΔF).

Figures 8A-8B are [is] allele specific PCR analysis of CFPAC-1 cells transfected with rec A coated and uncoated 491 base fragments.

Please delete the paragraph at page 11, lines 36-37, and replace it with the following paragraph:

Figures 30A-B show [is] a new genomic DNA sequence of human CFTR gene exon 10 and flanking intron regions (SEQ ID NO: 1).

Please delete the paragraph at page 27, line 25 to page 28, line 10, and replace it with the following paragraph:

FIG. 3 shows diagrammatic representation of the generation of fragments 491 (N) and 488 (Δ F) that contain wtCFTR and Δ 508 CFTR sequences, respectively. The fragments contain a second mutation in exon 10 (a G>C conversion at base pair 197 of the 491 bp fragment) that gives rise to an Xho I cut site. This mutation is in the third base of codon 11 (in exon 10) and does not change the amino acid determined by this codon. The M3 primer is a 21 base sense (+) oligonucleotide (5'-GATTATGGGAGAACTCGAGCC-3') (SEQ ID NO:84) that has been generated with the G>C conversion at base 197 and comprises bases 182-202 of the sense strand of the 491 bp fragment. The M4 primer is a 21 base antisense (-) oligonucleotide (5'-ACCCTCTGAAGGCTCGAGTTC-3') (SEQ ID NO:85) that has a C>G conversion at base 197 of the antisense strand and comprises bases 212-192 of the antisense strand of the 491 bp fragment. The initial amplification with CF1/M4 and M3/CF5 gives fragments that are 212 and 310 bp, respectively for the wtCFTR sequences. For Δ F508 CFTR the fragments are CF1/M4 (212 bp) and M3/CF5 (307 bp), since the Δ F508 mutation deletes bases 293-295 of the 491 bp wtCFTR fragment. Restriction digestion of the 491 bp or 488 bp fragments with Xho I yields digestion fragments of 199 bp and 292 or 289 bp, respectively